

Agent Standards, Phase I

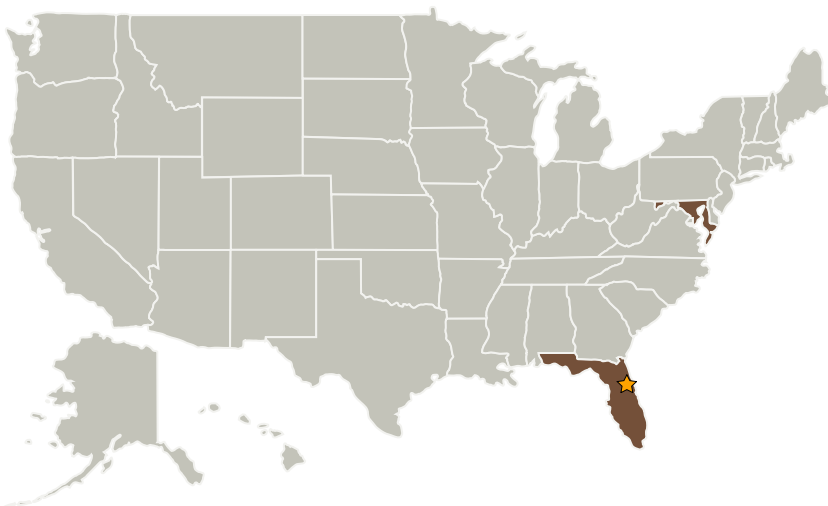
Completed Technology Project (2004 - 2004)



Project Introduction

The innovation of the work herein proposed is the development of standards for software autonomous agents. These standards are essential to achieve software agent-based systems whose software is reusable and interoperable. For NASA, many new developments, from scheduling, to planning and resource allocation, to simulation, to transportation logistics, etc are exploiting the emerging technology of software agents. Because software agents do not use any form of calling hierarchy to create a total system they are inherently more easily reused and inherently more interoperable than conventional software. On the other hand, NASA and other users of software agent technology will not fully benefit from this advantage without a better understanding of what is required for software agents to be reusable and interoperable, and without the development of formal specifications and eventually standards that enable diverse developers to build reusable and interoperable software agents. The proposed work will help insure that future software agents developed for KSC are more reusable and more interoperable than what is achieved today. It also offers Intelligent Automation, Incorporated and KSC the opportunity to make an international impact on agent-based software for the next decade and beyond.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Kennedy Space Center (KSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★ Kennedy Space Center(KSC)	Lead Organization	NASA Center	Kennedy Space Center, Florida
Intelligent Automation, Inc.	Supporting Organization	Industry	Rockville, Maryland

Primary U.S. Work Locations

Florida	Maryland
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Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Leonard Haynes

Technology Areas

Primary:

- TX10 Autonomous Systems
 - └ TX10.2 Reasoning and Acting
 - └ TX10.2.2 Activity and Resource Planning and Scheduling